



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,481	01/02/2002	Yong-Seok Song	P56631	5616

7590

04/21/2003

Robert E. Bushnell
1522 K Street, N.W., Suite 300
Washington, DC 20005

EXAMINER

VO, TUYET THI

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 04/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,481

Applicant(s)

SONG ET AL.

Examiner

Tuyet Vo

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-10, 13 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 5-7, 11, 12, 14-17 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2002 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Detailed Action

Applicant's amendment filed February 13, 2003 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 8-10, 13 and 18-21 are rejected under 35 U.S.C. 103(a) as being anticipated by Chen (US Pat. 5,350,967) in view of Say (US Pat. 4,374,341).

Chen discloses an inline electron gun for a color cathode ray tube (Figs. 5-14), the gun comprising:

cathodes (32a, 32b, 32c), arranged substantially in a horizontal line, emitting an electron beam;

a control electrode (34) having first hole regions (54), each one of the first hole regions including a first rectangular elongated indented portion (112) formed at an output side surface of the control electrode (34), wherein the first hole portion with a circular shape having vertical and horizontal widths equal to each other, the electron beam passing through the control electrode;

a screen electrode (36) being installed adjacent to the control electrode (34), the screen electrode (36) having second hole regions (118), wherein the second hole regions having circular shape (Fig. 12); and

a plurality of focusing electrodes (38, 40, 42, 44, 46) being sequentially installed from the screen electrode and respectively forming electron beam passing holes having a predetermined

Art Unit: 2821

shape (Fig. 5), the focusing electrodes form a plurality of quadrupole lenses (col. 10, lines 57-67 and col. 11, lines 1-36).

However, Chen does not disclose the control electrode having the first hole regions being formed as vertically elongated indented.

Say discloses an electron gun for cathode ray tube (Figs. 4-9) comprising a cathode (41), a screen electrode (47) located adjacent to a control electrode (45), wherein the control electrode (45) has a hole region including a vertically elongated indented portion (Fig. 5) formed at an output side surface of the control electrode.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the vertically elongated indented portion as taught by Say into the Chen inline electron gun in order to increase the controllability of focusing the electron beam, so as to achieve a desired electron beam's reflection on the screen of the cathode ray tube.

Allowable Subject Matter

3. Claims 5-7, 11, 12, 14-17 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to suggest each one of the second hole regions including a second indented portion formed at an output side surface of the screen electrode and a second hole portion formed in the second indented portion as required in claims 5, 11 and 22. The prior art also lacks to establish plurality of focusing electrodes installed in an order manner related to a control and screen electrodes in that a fourth and fifth focusing electrodes forming a first quadrupole lens and a second quadrupole lens respectively as required in claims 14.

Correspondence

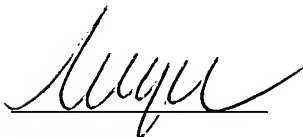
Art Unit: 2821

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyet Vo whose telephone number is 703 306 5497. The examiner can normally be reached on Mon-Fri.

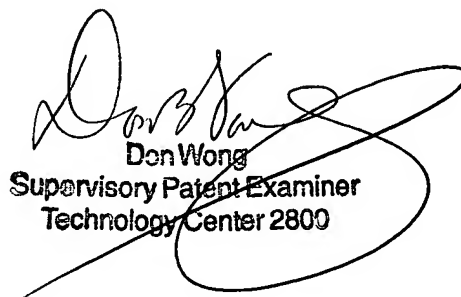
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 703 308 4856. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308 7722 for regular communications and 703 308 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.



Tuyet Vo

April 15, 2003



Don Wong
Supervisory Patent Examiner
Technology Center 2800